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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/528,426

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EXAMINER

LEE, BENNY T

ART UNIT

PAPER NUMBER

2817

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/27/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/528,426

Applicant(s)

MUELLER ET AL.

Examiner

Benny Lee

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10-14; 6-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

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The disclosure is objected to because of the following informalities in the substitute specification filed 18 March 2005: In the replacement paragraph which bridge pages 2 & 3, first line therein, note that "striplines ML1, ML2 each end underneath ..." should be rephrased for clarity of description. Page 3, line 17, note that "with this which" should be rephrased for clarity of description. Page 7, in the heading, note that "**DRAWINGS**" should be rewritten as --**PREFERRED EMBODIMENTS**-- for consistency with PTO guidelines. Note that the following reference labels need a corresponding description relative to the specification's description of that drawing figure: Fig. 3 "SK"; Fig. 5 (TM, RM). Appropriate correction is required.

Claims 1-5, 10-14; 6-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 6, note that it is unclear how "a structured metallic layer" relates to "at least one metallic strip line" (i.e. the "strip line" is a part of the "structures metallic layer", the "strip line" is separate from "structured metallic layer", etc). Clarification is needed.

The following claims have been found to be objectionable for reasons set forth below:

In claim 6, line 5, note that "fitter" should be correctly spelled as --filter--.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 10-14; 6-9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Takahashi.

Takahashi (Figs. 6A, 6B) discloses a waveguide filter comprising: a glass substrate (301) having an upper face thereof coated by a coplanar conductive pattern, which includes a microstrip filter pattern (309), a coplanar ground pattern substantially surrounding the microstrip filter pattern (309) and at least one metallic coplanar waveguide strip line portion (i.e. 308) electro-magnetically coupled to the microstrip filter pattern as to provide input/output coupling to the microstrip filter pattern. A "component" (i.e. silicon substrate 302) includes a cavity (i.e. 303) patterned in the silicon substrate (302) as to define "side walls" [including one sidewall opposite the upper face of substrate (301)] in the silicon substrate (302). A metal ground layer (i.e. 304) is coated on the side wall surfaces of the silicon substrate (302), including the sidewall opposite the upper surface of substrate (301). Note that the "component" is surface mounted with respect to the glass substrate (301) such as to form a hollow air cavity (i.e. 305) over the microstrip filter pattern (309) and a portion of the coplanar waveguide strip lines (308). In particular, note that the ground plane layer (304) is in electrical contact (i.e. via micro bumps 306) with the surrounding ground plane on glass substrate (301) such that the ground plane on substrate (301) in conjunction with the ground plane layer (304) on the sidewalls of component substrate (302) define the walls of a hollow cavity substantially enclosing the microstrip filter and the coplanar waveguide input/output strip line pattern. Also, note that the hollow cavity (303) of the component further includes a thin circumferential periphery or "web" which provides the portion of ground plane layer (304) in electrical contact with the surrounding ground plane of the substrate (301). It should be noted that as known to those of ordinary skill in

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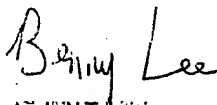
the art, the resultant enclosed air cavity functions as a cavity structure with specific cross-sectional dimensions resulting in the hollow cavity being resonant at a particular frequency, thereby necessarily affecting the frequency characteristic of the overall filter

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yuda discloses a strip line filter including a conductive cap disposed over the strip line filter..

Any inquiry concerning this communication should be directed to Benny Lee at telephone number 571 272 1764.

B. Lee

  
BENNY T. LEE  
PRIMARY EXAMINER  
ART UNIT 2817